

Listing and Amendments to the Claims

This listing of claims will replace the claims that were published in the PCT Application and the International Preliminary Report on Patentability:

1. (currently amended) An active-matrix image display device comprising:
 - several light emitters (~~2; 52~~) forming an array of emitters distributed in rows and columns;
 - power supply means (V_{dd}) capable of supplying current simultaneously to all of the emitters (~~2; 52~~) of a column during an emission step and a step of programming the emitters (~~2; 52~~);
 - means (~~3~~) for controlling the emission of the emitters (~~2; 52~~) comprising:
 - for each emitter (~~2; 52~~) of the array, a current modulator (~~14; 54~~) comprising a source electrode, a drain electrode and a gate electrode, a drain current (I_d) being able to pass through said modulator in order to supply said emitter (~~2; 52~~), for a voltage between the drain or the source and the gate equal to or greater than a trip-threshold voltage (V_{th}),
 - for each column of emitters (~~2; 52~~), column address means (~~10; 60~~) capable of addressing in succession each emitter (~~2; 52~~) of said column of emitters by applying a value (I_{data} , V_{data}) representative of a data setpoint (U_o) to the gate electrode of the modulator (~~14; 54~~) associated with this emitter (~~2; 52~~), in order to actuate it, during a programming step,
 - for each row of emitters (~~2; 52~~), row select means (~~8; 68~~) capable of selecting in succession the emitters (~~2; 52~~) of each row of emitters, during the programming step and
 - for each modulator (~~14; 54~~), storage means (~~18~~) capable of storing electric charges at the gate electrode of the modulator (~~14; 54~~); and
 - trip-threshold voltage compensation means (~~12~~) comprising comparators (~~28~~), the comparators (~~28~~) being capable of comparing, during the step of programming a selected emitter (~~2; 52~~), a value representative of the drain current (I_d) supplying the selected emitter with the value (I_{data} , V_{data})

representative of the data setpoint (U_e) for controlling the quantity of charge stored in the storage means (18),

~~characterized in that~~ wherein the compensation means (12) comprise, for each column of emitters (2; 52), a single unit (26) for determining a representative value of the drain current (I_d) supplying the selected emitter (2; 52) on the basis of a measurement of a representative value of the current for supplying all of the emitters (2; 52) of the column.

2. (currently amended) The image display device as claimed in claim 1, ~~characterized in that~~ wherein the power supply means (V_{dd}) for the emitters are connected directly to each modulator (14) of the control means.
3. (currently amended) The image display device as claimed in claim 1, ~~characterized in that~~ wherein the power supply means (V_{dd}) for the emitters are connected directly to each emitter (2) of a column.
4. (currently amended) The image display device as claimed in ~~any one of the preceding claims,~~ characterized in that claim 1, wherein the power supply means (V_{dd}) for the emitters comprise a voltage supply generator capable of supplying all of the emitters of a column and in that the compensation means (12) are capable of compensating in succession the trip-threshold voltage (V_{th}) of each modulator (14; 54) of all of the emitters of a column.
5. (currently amended) The image display device as claimed in ~~any one of the preceding claims,~~ characterized in that claim 1, wherein the compensation means (12) further include:
 - a drive generator (30) capable of generating a drive signal (I_{data}) applied to the gate of said modulator (14; 54); and
 - means (28; 34) for modulating the duration of said drive signal (I_{data}) according to the value of the data setpoint (U_e) and the value of the trip-threshold voltage (V_{th}).

6. (currently amended) The image display device as claimed in ~~any one of the preceding claims, characterized in that~~ claim 5, wherein the data setpoint (U_e) is a data voltage and in that the comparators (28) are capable of emitting a warning signal (S) when the voltage representative of the intensity of the drain current (I_d) is equal to a number of times said data voltage.
7. (currently amended) The image display device as claimed in ~~claim 5 in combination with claim 6, characterized in that~~ wherein the means for modulating the duration of the drive signal (I_{data}) comprise:
 - a switch (32) connected in series with the drive generator (30); and
 - a control unit (34) capable of switching said switch (32), on the one hand, when the data setpoint (U_e) is received, and on the other hand, when the warning signal (S) is received.
8. (currently amended) The image display device as claimed in ~~any one of claims 5 to 7, characterized in that~~ claim 5, wherein the drive signal (I_{data}) generated by the drive generator (30) is amplitude-modulated according to the value of the data setpoint (U_e).
9. (currently amended) The image display device as claimed in ~~any one of claims 5 to 8, characterized in that~~ claim 5, wherein the drive generator (30) is a current generator and the modulator (14; 54) is capable of being current-controlled.
10. (currently amended) The image display device as claimed in ~~any one of claims 5 to 8, characterized in that~~ claim 5, wherein the drive generator (30) is a ramp voltage generator and the modulator (14; 54) is capable of being voltage-controlled.

11. (currently amended) The image display device as claimed in ~~any one of the preceding claims, characterized in that~~ claim 1, wherein the compensation means ~~(12)~~ further include a unit ~~(26)~~ for measuring the intensity of a current, capable of measuring the intensity of the drain current (I_d) passing through a selected emitter ~~(2)~~ during the programming step ~~(C)~~.
12. (currently amended) The image display device as claimed in claim 11, ~~characterized in that~~ wherein the supply means comprise a line ~~(4)~~ to which the measurement unit ~~(26)~~ is directly connected.
13. (currently amended) The image display device as claimed in ~~any one of the preceding claims, characterized in that~~ claim 1, wherein the storage means comprise at least one storage capacitor ~~(18)~~ connected to the gate and to the source of the modulator ~~(14)~~ and in that the compensation means ~~(12)~~ further include reset means ~~(36)~~ capable of applying a voltage pulse to said capacitor in order to discharge it.